

CLAIMS

What is claimed is:

1. An electronic pad receiving a strike on an upper surface, detecting the strike and outputting a signal representative of the strike comprising:
 - a disk-shaped first frame;
 - a striking sensor detecting the strike transmitted to said first frame; and
 - a second frame supporting said first frame from below.
2. The electronic pad according to Claim 1, wherein the second frame is made of a softer material than a material for said first frame.
3. The electronic pad according to Claim 2, wherein the second frame has an attachment hole in the center thereof and vertically penetrating the second frame, and
wherein the second frame is supported by a pole of a stand supporting the electronic pad by inserting the pole into the attachment hole
4. The electronic pad according to claim 3, wherein said first frame has a larger opening portion than said attachment hole of said second frame, the opening portion provided on a central portion of the first frame; and
said second frame includes a head portion having said attachment hole and inserted into said opening portion from below in an upward direction, and a shoulder portion supporting a surrounding portion of said opening portion of said first frame from below, the surrounding portion surrounding the head portion.
5. The electronic pad according to claim 3, wherein
said second frame has a concave portion around said attachment hole on a lower surface of the second frame, the concave portion having a trough extending in a predetermined direction and hollowed into a wedge shape, an upper surface of the concave portion having an insertion hole at the center thereof and having such a shape as to protrude in a wedge shape

having a ridge extending in the predetermined direction, said pole being inserted into the insertion hole to allow the second frame to be supported by a rotation stopper member fixed to the pole from below.

6. The electronic pad according to claim 5, wherein said concave portion is rockably fitted into said rotation stopper member with resulting play.

7. An electronic pad receiving a strike on an upper surface, detecting the strike, and outputting a signal representative of the strike, comprising:

a disk-shaped first frame;

a cover covering an upper surface of said first frame, having a cup portion formed on a central portion of the cover; and

a striking sensor detecting the strike transmitted to said first frame through said cover.

8. The electronic pad according to claim 7, wherein a space is formed between the cup portion and the upper surface of the first frame, such that the cup portion of the cover makes no contact with said first frame

9. The electronic pad according to claim 7, wherein said cover has a dome-shaped core on the central portion, and

wherein portions of the cover other than the core are formed out of a softer material than a material for said first frame.

10. The electronic pad according to claim 7, wherein said first frame has an outer peripheral edge portion formed downward by an annulus step; and

wherein a portion of the cover covering said outer peripheral edge portion is thick, whereby an upper surface of said cover contacting said step is flat.

11. The electronic pad according to claim 7, wherein said cover spreads beyond a peripheral edge of said first frame and folds toward a rear surface side of the peripheral edge of the first frame.

12. The electronic pad according to claim 7, wherein said cover spreads over the entire rear surface side of the first frame.

13. The electronic pad according to claim 7, wherein said first frame is shaped such that a peripheral edge portion of the first frame is cut off; and

wherein a portion of said cover covering the cut off portion of the peripheral edge portion of said first frame is formed out of more material per unit length along the peripheral edge than a material for a portion of the cover covering an uncut part of the peripheral edge portion.

14. The electronic pad according to claim 7, wherein said striking sensor adheres to a portion of said first frame covered with the cup portion formed on the central portion of said cover.

15. The electronic pad according to claim 7, further comprising a sheet sensor formed on said first frame, provided on a portion between the first frame and a dome-shaped peripheral edge formed on said central portion of the cover, extending in a circumferential direction, and detecting a strike applied to said cup portion.

16. The electronic pad according to claim 15, wherein said sheet sensor extends to only a portion of said first frame in a circumferential direction.

17. The electronic pad according to claim 15, wherein said sheet sensor extends over the entire first frame in a circumferential direction.

18. The electronic pad according to claim 7, further comprising

a sheet sensor provided on an upper surface of a peripheral edge portion of said first frame, and extending to only a part of said first frame in a circumferential direction.

19. The electronic pad according to claim 7, further comprising:
a sheet sensor provided on an upper surface of a peripheral edge portion of said first frame and extending over the entire first frame in a circumferential direction.

20. The electronic pad according to Claim 7, wherein said first frame has a varying radius.

21. An electronic pad receiving a strike on an upper surface, detecting the strike and outputting a signal representative of the strike, comprising:

a disk-shaped first frame;

a striking sensor detecting the strike transmitted to said first frame; and

a sheet sensor provided on a lower surface of a peripheral edge portion of said first frame, extending in a circumferential direction, and detecting an operation with respect to the lower surface of the peripheral edge portion.

22. The electronic pad according to Claim 21, wherein the sheet sensor detects an operation with respect to an upper surface of the peripheral edge portion.

23. The electronic pad according to Claim 21, wherein said first frame has a varying radius.

24. The electronic pad according to claim 21, wherein said sheet sensor extends to only a part of said first frame in the circumferential direction.

25. The electronic pad according to claim 21, wherein said sheet sensor extends over the entire first frame in the circumferential direction.

26. An electronic pad receiving a strike on an upper surface, detecting the strike, and outputting a signal representative of the strike; comprising:

a disk-shaped first frame;

a cover covering an upper surface of said first frame, having a cup portion formed on a central portion of the cover, a space being formed between the cup portion and the upper surface of the first frame, such that the cup portion of the cover makes no contact with said first frame;

a striking sensor adhering to a portion of said first frame covered with the cup portion formed on the central portion of said cover;

a first sheet sensor formed on said first frame between the first frame and a dome-shaped peripheral edge portion formed on the central portion of said cover, and detecting a strike applied to said cup portion;

a second sheet sensor provided on an upper surface of a peripheral edge portion of said first frame, and detecting a strike applied to the peripheral edge portion; and

a third sheet sensor provided on a lower surface of the peripheral edge portion of said first frame, and detecting an operation with respect to the lower surface of the peripheral edge portion.

27. The electronic pad according to claim 26, further comprising

a first jack outputting signals from a channel connected to said striking sensor and from a channel connected to said first and third sheet sensors; and

a second jack outputting signals from the channel connected to said striking sensor and from a channel connected to said second sheet sensor.

28. The electronic pad according to claim 27, wherein the electronic pad is rockably attached to a pole around a predetermined horizontal axis; and

said first jack and said second jack are provided near said horizontal axis.

29. The electronic pad according to claim 27, wherein the electronic pad comprises a second frame formed out of a softer material than a material for said first frame, supporting said first frame from below, and supported by the pole; and

said first jack and said second jack are fixed to said second frame.

30. The electronic pad according to claim 27, wherein said first jack and said second jack are fixed to said first frame.

31. An electronic pad comprising
a first frame having a peripheral edge portion;
a cover covering the first frame, a peripheral edge portion of the cover contacting the peripheral edge portion of the first frame; and
a sensor placed between the first frame and the cover.

32. The electronic pad according to Claim 31, further comprising a second frame supporting the first frame.

33. The electronic pad according to Claim 31, wherein the first frame is disk-shaped.

34. The electronic pad according to Claim 33, wherein the first frame has a varying radius.

35. The electronic pad according to Claim 31, wherein the peripheral edge portion of the first frame has an annulus step forming downward.

36. The electronic pad according to Claim 31, wherein an upper surface of the peripheral edge portion of the cover contacting the peripheral edge portion of the first frame is flat.

37. The electronic pad of Claim 31, wherein the cover is coated with a rubber primer.

38. A percussion instrument comprising

a first frame having a peripheral edge portion; and
a cover covering the first frame, a peripheral edge portion of the cover contacting the peripheral edge portion of the first frame.

39. The percussion instrument according to Claim 38, further comprising a second frame supporting the first frame.

40. The percussion instrument according to Claim 38, wherein the first frame is disk-shaped.

41. The percussion instrument according to Claim 40, wherein the first frame has a varying radius.

42. The percussion instrument according to Claim 38, wherein the peripheral edge portion of the first frame has an annulus step forming downward.

43. The percussion instrument of Claim 38, wherein an upper surface of the peripheral edge portion of the cover contacting the peripheral edge portion of the first frame is flat

44. The percussion instrument of Claim 38, wherein the cover is coated with a rubber primer.